Protocol
PC-1

SECTION: PC-1

PROTOCOL TITLE: PED CARDIAC/RESPIRATORY ARREST

REVISED: April 29, 2011

PED CARDIAC/RESPIRATORY ARREST

BLS SPECIFIC CARE: *See General Pediatric Care Protocol P-1*

- *For unwitnessed arrest*: Consider 2 minutes of good, sustained, and effective CPR prior to defibrillation or AED attachment
- For *witnessed* Arrest, or after 2 minutes of good, effective and sustained CPR: AED use per 2010 AHA guidelines and manufacturer recommendations
    - Adult AED's can be used in children less than 1 year of age
    - Single shocks are recommended to reduce interruption of CPR
- When possible, reduce interruptions of chest compressions
- When VF/pulseless ventricular tachycardia (VT) is present, deliver 1 shock and immediately resume CPR, beginning with chest compressions. *Do not delay resumption of chest compressions to recheck the rhythm or pulse.*
- After 5 cycles (about 2 minutes) of CPR, analyze the cardiac rhythm and deliver another shock if indicated. If a non-shockable rhythm is detected, resume CPR immediately
- Careful use of BVM, airway adjuncts. Ventilations should occur over 1-2 seconds
- Avoid hyperventilation/hyperinflation
- Notify responding ALS unit ASAP

ILS SPECIFIC CARE: ***See General Pediatric Care Protocol P-1***

- IV access (to a max of three attempts) only if needed due to severity of underlying injury or illness, otherwise defer until arrival of ALS providers
    - IV: Crystalloid solution at a TKO rate
    - 10-20 cc/kg, repeat as needed for 3 total boluses
- IO access: as needed after unsuccessful peripheral vascular access. Follow fluid administration guidelines as above

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PED CARDIAC ARREST

ALS SPECIFIC CARE: *See General Pediatric Care Protocol P-1*

- Consider underlying causes of cardiac arrest and treat as well
- Defibrillation settings: (after 2 minutes of CPR unless witnessed arrest)
    - 2 - 4 J/kg SINGLE shock as needed
    - Subsequent single defibrillations at 4 J/kg
    - Higher energy levels may be considered, not to exceed10 J/kg or the adult maximum dose.

Cardio-active Drugs

- Epinephrine (for all Pulseless Rhythms)
    - IV/IO: 0.01 mg/kg 1:10,000 concentration every 3-5 minutes
    - ETT: 0.1 mg/kg 1:1,000 concentration every 3-5 minutes

Antiarrhythmic therapy:

- Lidocaine (VF, V-Tach, Refractory Torsades)
    - IV/IO: 1 mg/kg to a max of 3 mg/kg every 3-5 min.
    - ET: 2 mg/kg diluted in NS
- Magnesium Sulfate (for refractory VF/VT, First Line for Torsades)
    - IV/IO: 25-50 mg/kg
    - Max 2 g

Consider as appropriate:

- Sodium Bicarbonate for known hyperkalemia, bicarb acidosis (DKA, TCA), prolonged resuscitation after ROSC.
    - IV: 1 meq/kg repeated in 10 minutes at 0.5 meq/kg. Follow DKA/TCA recommendations if DKA or TCA OD is suspected
- Narcan (Naloxone) for suspected narcotic overdose.
    - IV/ETT: 0.1 mg/kg repeated PRN.
    - Max of 2.0 mg/dose
- Dextrose for hypoglycemia
    - Birth to 3 months; use D10 10ml/kg slow IV/IO push
    - >3 months; use D25 4 ml/kg slow IV/IO push
    - See Pediatric Hypoglycemia Protocol (PM-6)